

REMARKS

Applicant respectfully requests reconsideration. Claims 1-59 were previously pending this application. Claims 41-59 have been withdrawn from consideration. Claims 1-40 are pending for examination with claims 1, 37, and 40 being independent claims.

Rejection of Claims 1-40 under 35 U.S.C. §103(a)

Claims 1-40 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,194,344 to Tsuchitani et al. ("Tsuchitani"). Applicant respectfully traverses this rejection.

Applicant does not see any reason why one of ordinary skill in the art would modify Tsuchitani, alone or in combination with prior art, to produce the invention as claimed, or how one skilled in the art would combine known elements, or substitute one known element for another, to predictably reach the invention as claimed. The Patent Office must provide an articulated reasoning as to why the claimed invention would have been obvious in view of the references, as is required to support a *prima facie* case of obviousness under 35 U.S.C. §103(a).

The Patent Office has not shown where, in Tsuchitani, a porous structure wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm, as described in claim 1, is disclosed. Applicant respectfully disagrees with the statement in the Office Action that Tsuchitani teaches "controlling the crystal structures of a carbon material of the claimed pore distribution." While Tsuchitani describes materials containing "uniform minute pores," Tsuchitani does not expressly teach or suggest a porous structure wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm, nor can it be seen where Tsuchitani necessarily inherently describes such a structure.

Although the Patent Office states that "while not teaching conductivity or other properties, no differences are seen [between the structures in Tsuchitani and in the present invention] due to the similarity of the structure," the Patent Office has pointed to no objective evidence that would allow the Patent Office to form such a conclusion. Such a general statement, without any evidentiary support, is inadequate to support a *prima facie* case of obviousness. The Patent Office must provide

an articulated reasoning, and not just mere conclusory statements, to support a legal conclusion of obviousness.

Because each claim limitation is not taught or suggested by Tsuchitani, and there is no articulated reasoning as to why one of ordinary skill in the art would modify the teachings of Tsuchitani to predictably reach the invention as claimed, claim 1 is patentable over Tsuchitani. Claims 2-36 depend from claim 1 and are also patentable for at least this reason.

Claims 37 and 40 also describe porous structures wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm. As noted above, the Patent Office has not shown where, in Tsuchitani, such a structure is described. Also, the Patent Office has not provided any reason why one of ordinary skill in the art would modify the teachings of Tsuchitani to predictably reach the invention as claimed.

Because each claim limitation is not taught or suggested by Tsuchitani, and there is no articulated reasoning as to why one of ordinary skill in the art would modify the teachings of Tsuchitani to predictably reach the invention as claimed, claims 37 and 40 are also patentable over Tsuchitani. Claims 38-39 depend from claim 37 and are also patentable for at least this reason.

Accordingly, withdrawal of the rejection on this ground is respectfully requested.

Rejection of Claims 1-40 under 35 U.S.C. §102(b), or under 35 U.S.C. §103(a)

Claims 1-40 have been rejected under 35 U.S.C. §102(b) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,297,293 to Bell et al. ("Bell"). Applicant respectfully traverses this rejection.

The Patent Office has not shown where, in Bell, a porous structure wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm, is disclosed, as described in claims 1, 37, and 40. Bell does not expressly teach or suggest a porous structure wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm, nor can it be seen where Bell necessarily inherently describes such a structure.

Regarding the alternative rejections under 35 U.S.C. §103(a), Applicant does not see any reason why one of ordinary skill in the art would modify Bell, alone or in combination with prior

art, to produce the invention as claimed, or how one skilled in the art would combine known elements, or substitute one known element for another, to predictably reach the invention as claimed. The Patent Office must provide an articulated reasoning as to why the claimed invention would have been obvious in view of the references, as is required to support a *prima facie* case of obviousness under 35 U.S.C. §103(a).

Although the Patent Office states that “no difference is seen [between the structures in Bell and in the present invention],” the Patent Office has pointed to no objective evidence that would allow the Patent Office to form such a conclusion. Such a general statement, without any evidentiary support, is inadequate to support a *prima facie* case of obviousness. The Patent Office must provide an articulated reasoning, and not just mere conclusory statements, to support a legal conclusion of obviousness.

Because each claim limitation is not taught or suggested by Bell, and there is no articulated reasoning as to why one of ordinary skill in the art would modify the teachings of Bell to predictably reach the invention as claimed, claims 1, 37, and 40 are patentable over Bell. Claims 2-36 and 38-39 depend from claims 1 and 37, respectively, and are also patentable over Bell for at least this reason.

Accordingly, withdrawal of the rejection on this ground is respectfully requested.

Rejection of Claims 1-15 and 19-40 under 35 U.S.C. §103(a)

Claims 1-15 and 19-40 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,585,948 to Ryoo et al. (“Tsuchitani”). Applicant respectfully traverses this rejection.

Applicant does not see any reason why one of ordinary skill in the art would modify Tsuchitani, alone or in combination with prior art, to produce the invention as claimed, or how one skilled in the art would combine known elements, or substitute one known element for another, to predictably reach the invention as claimed. The Patent Office must provide an articulated reasoning as to why the claimed invention would have been obvious in view of the references, as is required to support a *prima facie* case of obviousness under 35 U.S.C. §103(a).

The Patent Office has not shown where, in Ryoo, a porous structure wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm is disclosed, as described in claims 1, 37, and 40. Ryoo does not expressly teach or suggest a porous structure wherein at least 90% of the pores have an entrance diameter with a largest cross-sectional dimension smaller than 50 nm, nor can it be seen where Ryoo necessarily inherently describes such a structure. Although the Patent Office states that “no differences are seen [between the structures in Ryoo and in the present invention] due to the similarity of the structure,” the Patent Office has pointed to no objective evidence that would allow the Patent Office to form such a conclusion. Such a general statement, without any evidentiary support, is inadequate to support a *prima facie* case of obviousness. The Patent Office must provide an articulated reasoning, and not just mere conclusory statements, to support a legal conclusion of obviousness.

Because each claim limitation is not taught or suggested by Ryoo, and there is no articulated reasoning as to why one of ordinary skill in the art would modify the teachings of Ryoo to predictably reach the invention as claimed, claims 1, 37, and 40 are patentable over Ryoo. Claims 2-15 and 19-36, and 38-39 depend from claims 1 and 37, respectively, and are also patentable over Ryoo for at least this reason.

Accordingly, withdrawal of the rejection on this ground is respectfully requested.

Rejection of Claims 1-14 and 19-40 under 35 U.S.C. §102(e), or under 35 U.S.C. §103(a)

Claims 1-14 and 19-40 have been rejected under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,936,234 to Bilenko (“Bilenko”). The Office Action indicates that the rejection of claims 1-14 and 19-40 is made under 35 U.S.C. §102(e). However, subject matter that qualifies as prior art only under §102(e) does not preclude patentability under §103. (See 35 U.S.C. §103(c).) However, Applicant notes that Bilenko may qualify as prior art under either §102(a) or §102(b), and Applicant will respond as if the rejection is made based under either §102(a) or §102(b). Applicant respectfully traverses this rejection.

Bilenko does not expressly, or inherently, teach or suggest a porous structure, as described in claims 1, 37, and 40. Rather, Bilenko teaches structures of pyrolytic carbon with “large areas of

three-dimensional array characteristic of graphite... characterized by high density, absence of macro- and transition pores and the presence only of microporosities between crystallites.” (Please see col. 2, lines 24-32, of Bilenko.) That is, the structures disclosed in Bilenko are not porous structures. Furthermore, Bilenko describes “[g]rinding of pyrolytic carbon ... result[s] in artificial graphite powder with practically perfect crystal graphite structure.” (Please see col. 2, lines 39-43 of Bilenko.)

Regarding the alternative rejections under 35 U.S.C. §103(a), the Patent Office has presented no reason to make any modification of the prior art that would result in compositions or devices as claimed. Applicant does not see any reason why one of ordinary skill in the art would modify Bilenko, alone or in combination with prior art, to produce the invention as claimed, or how one skilled in the art would combine known elements, or substitute one known element for another, to predictably reach the invention as claimed. The Patent Office must provide an articulated reasoning as to why the claimed invention would have been obvious in view of the references, as is required to support a *prima facie* case of obviousness under 35 U.S.C. §103(a).

Although the Patent Office states that “no difference is seen [between the structures in Bilenko and in the present invention],” the Patent Office has pointed to no objective evidence that would allow the Patent Office to form such a conclusion. Such a general statement, without any evidentiary support, is inadequate to support a *prima facie* case of obviousness. The Patent Office must provide an articulated reasoning, and not just mere conclusory statements, to support a legal conclusion of obviousness.

Because each claim limitation is not taught or suggested by Bilenko, and there is no articulated reasoning as to why one of ordinary skill in the art would modify the teachings of Bilenko to predictably reach the invention as claimed, claims 1, 37, and 40 are not patentable over Bilenko. Claims 2-15 and 19-36, and 38-39 depend from claims 1 and 37, respectively, and are also patentable for at least this reason.

Accordingly, withdrawal of the rejection on this ground is respectfully requested.

In view of the above remarks, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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